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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/551,781

10/05/2005

Gregorius Maria Hubertus Goyarts

GOY4

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EXAMINER

KHATRI, PRASHANT J

ART UNIT

PAPER NUMBER

1783

NOTIFICATION DATE

DELIVERY MODE

08/17/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/551,781	Applicant(s) GOYARTS, GREGORIUS MARIA HUBERTUS	
	Examiner PRASHANT J. KHATRI	Art Unit 1783	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 May 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

In response to Amendments/Arguments filed 5/25/2010. Claims 1 and 4-21 are pending.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 4-10, 13-15, and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hahn et al. (**US 5306267**) in view of Levy (**US 5114418**) and Tolbert et al. (**US 20010001300**) with evidence provided by Gagliardi et al. (**US 6245693**) and Carlucci et al. (**US 20020141898**) and Peterson (**US 5562648**).

3. Hahn et al. disclose a reusable diaper (**FIGS. 3 and 4**) that is comprised of at least a front panel (**element 12**), middle panel (**element 14**), and back panel (**element 16**). Prior art discloses the front panel is comprised of a polyester wicking fabric, cotton, polyester, nylon, and the like (**col. 5, lines 22+**). The middle panel is an absorbent layer comprised of viscose rayon (**col. 5, lines 44+**). The back panel is a liquid impermeable material such as nylon (**col. 7, lines 24+**). Further, prior art discloses the front and back panels may be joined together by adhesives (**col. 7, lines 57+**). Regarding claims 7 and 21, prior art discloses additional layers (**element 18**) may

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be disposed between the middle panel and the front panel that are cotton (**col. 6, lines 39+**). As disclosed by prior art, these layers are comprised of cotton, which is one of the least allergenic materials (**col. 6, lines 40+**). Examiner takes the position that this is equivalent to the presently claimed additional anti-allergy layer as cotton is a known material that is very anti-allergenic. As evidenced by Peterson, the polyester wicking fabric is an open knit structure having four channel fibers used in the same way as Hahn (**col. 3, lines 61+; Peterson**). Given that the a "fraying-free fabric" is considered by Applicant to be a knitted fabric having "special measures" taken to keep the fabric from fraying and as such considered in the broadest, reasonable sense, it is the Examiner's position that the polyester wicking fabric of Hahn having an open knit structure would meet the instant limitation. However, prior art is silent to the use of adhesives in the interfacial areas, the use of moisture-curable plastic materials, and placing adhesive material on the edges of a surface to form a border pattern.

4. Levy discloses a highly absorbent, leak-proof, breathable diaper. Prior art discloses a three-layer diaper that is comprised of at least one layer that is a fabric and reusable (**FIG. 1; col. 1, lines 33+**). Regarding the patterning of adhesive disclosed in claims 1-2 and 8, prior art discloses a urethane adhesive that is applied between the top layer (**element 10**) and intermediate layer (**element 12**) and intermediate layer and bottom layer (**element 14**). Further, it is noted that the adhesive material between the above layers is applied by using a cross-hatch, line-gravure, or dot-roller to ensure the resulting laminations remain intact after machine washings (**col. 2, lines 25+**). Given that Levy discloses Further, Examiner takes the position that the dot-roller would form a

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series of dots to form the adhesive pattern and forms the presently claimed interfacial region between the layers as shown in Figure 1. Regarding the finishing, it is noted that since the prior art discloses a laminate structure that contains adhesive material in the interfacial regions, Examiner takes the position that the resultant laminate does not undergo any further finishing steps. Further, as shown by prior art, the material is washed for testing purposes to determine durability after curing of the adhesive (**col. 2, lines 30+**). Concerning the amount of adhesive applied, it is considered to be an optimizable feature given that the amount of adhesive directly affects the bond strength of the laminate that one of ordinary skill in the art can adjust. See *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Regarding claim 4, given that Levy discloses that the patterning is done "so as to give a satisfactory level of bond strength and to insure that resulting laminations remain intact", it is the Examiner's position that one of ordinary skill in the art in order to maintain such standards would have designed a pattern that would include the border as presently claimed in claim 4. Furthermore, as evidenced by Gagliardi et al. and Carlucci et al., forming a border to maintain adhesiveness is well-known (**Figures 1 in each reference**).

5. Tolbert et al. disclose a method of constructing textile products using curable hot melt adhesives and products made thereof. Prior art discloses that the adhesive used is a moisture curable hot melt polyurethane that reacts with moisture present in the atmosphere to become a thermoset adhesive (**para. 0016**). Prior art also states the adhesive material may be applied between the surfaces of two or more adjacent textile fabrics to form a seam securing the fabrics to each other (**para. 0015**). Concerning the

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phrase "fully moisture-cured", Examiner takes the position that the phrase means degree of curing and as disclosed by prior art, the process is dependent on time span the textiles and adhesives are allowed to cure (**para. 0038-0053**). Furthermore, prior art discloses that the full cure time for polyurethane adhesive is a period from 1 to 10 days (**para.0049**). Therefore, it is clear that the polyurethane adhesive is fully moisture cured as presently claimed. Prior art also discloses the adhesive material is applied at an initial melt temperature (**para. 0039**). Furthermore, it is noted that the adhesive material is solid at room temperature and once a softening point temperature is reached, a phase change occurs (i.e. solid to liquid phase change) (**para. 0038**). Examiner takes the position that the application of the adhesive material at a temperature above the softening point is equivalent to Applicant's claim that the adhesive material is applied at a temperature higher than the melting point. Prior art further discloses the curable hot melt adhesives are advantageous because they do not require a discrete or separate cure step and using said hot melt adhesives in the presence of various textiles such as cotton accelerate the curing process (**para. 0048**). Examiner therefore takes the position that the production process is sped up and considered to be cheaper as the curing step would increase time and decrease productivity of a production line.

6. However, note that while Levy and Tolbert et al. do not disclose all the features of the present claimed invention, Levy and Tolbert et al. are used as teaching references, and therefore, it is not necessary for these secondary references to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA

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1981). Rather these references teach certain concepts, namely, patterning of adhesive materials in the interfacial regions and the use of hot melt moisture curable adhesives in order to ensure the resulting laminations remain intact after machine washings and that the production process is sped up and considered to be cheaper as the curing step would increase time and decrease productivity of a production line and in combination with the primary reference, discloses the presently claimed invention.

7. All of the elements were known within the art. The only difference is a single disclosure containing all of the presently claimed elements. Hahn et al. disclose a reusable diaper (**FIGS. 3 and 4**) that is comprised of at least a front panel (**element 12**), middle panel (**element 14**), and back panel (**element 16**). However, prior art is silent to the use of adhesives in the interfacial areas, the use of moisture-curable plastic materials, and placing adhesive material on the edges of a surface to form a border pattern. Levy discloses a three-layer laminate that is a highly absorbent, leak-proof, breathable diaper comprising a patterned adhesive material disposed in the interfacial regions between the layers. Tolbert et al. disclose a method of constructing textile products using curable hot melt adhesives and products made thereof.

The motivation to combine the above references is drawn towards the patterning the adhesive material between the each layer a three-layer laminate applied by using a cross-hatch, line-gravure, or dot-roller to insure the resulting laminations remain intact after machine washings. The use of a hot melt moisture-curable adhesive discloses the curable hot melt adhesives are advantageous because they do not require a discrete or separate cure step and using said hot melt adhesives in the presence of various textiles

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such as cotton accelerate the curing process. The resultant article is a durable material that can withstand multiple washings with interfacial adhesive patterning in three-layer systems and also providing for a fast and cheap way to produce materials containing adhesives as shown by Tolbert. Therefore, it would have been obvious to one of ordinary skill in the art to apply a patterned hot melt moisture curable adhesive in the interfacial regions of the laminate disclosed by Hahn et al.

8. Claims 11-12 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hahn et al. (**US 5306267**) in view of Levy (**US 5114418**) and Tolbert et al. (**US 20010001300**) as applied to claims 8-10 and 15 above, and further in view of McIntyre (**US 4911948**).

9. Prior art discloses the above in paragraphs 10-15. However, prior art is silent to the use of screen printing.

10. McIntyre discloses a method of screen printing of hot melt adhesives onto moving web substrates such as diapers and the like (**col. 2, lines 19+**). The screen printing apparatus is comprised of a slot nozzle within a screen cylinder sleeve (**col. 3, lines 37+**). Furthermore, it is noted that the hot melt adhesive material can be a polyurethane moisture cure type (**col. 6, lines 14+**). Regarding the heated stencil, prior art discloses the screen cylinder sleeve is heated to prevent solidification of the adhesive material (**col. 2, lines 39+**). Examiner takes the position that the screen cylinder has pores to allow dispersion of the adhesive material as the stencil as the adhesive material is distributed through the pores, which is the primary purpose of the

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stencil. Given that the screen cylinder is heated to prevent the clogging of the pores, the temperature would inherently be at a temperature above the melting point as if the temperature would be below the melting point, the pores of the screen cylinder would be clogged. Concerning the seamless nature of the cylinder, as shown by prior art in Figure 3, there is no seam on the cylinder. The process and apparatus as shown allows for improved speed and viscosity regulation by heating (**cols. 1 and 2**). Regarding the cutting of individual articles made from the continuous process, prior art discloses a die cutting process may be added after the screen printing process (**col. 2, lines 8+**).

Examiner takes the position that the use of a cutting process after lamination to produce individual articles is an obvious addition to the manufacturing process as it would allow for easier packaging of goods for sale.

11. However, note that while McIntyre does not disclose all the features of the present claimed invention, McIntyre is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely, screen printing of adhesive material using a roller stencil in order to increase production of articles containing adhesives on web material and in combination with the primary reference, discloses the presently claimed invention.

12. All of the elements were known within the art individually. The only difference was a single disclosure containing all of the presently claimed elements. Prior art discloses the above in paragraphs 6-10. However, prior art is silent to the screen

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printing process. McIntyre discloses a rotary screen printing process onto web substrates using a hot melt adhesive. Although McIntyre only discloses the screen printing process onto one layer of material, it would be obvious to one with ordinary skill in the art to use a second screen printing section to coat a second layer of material. The motivation to combine the above references is drawn towards the increase in production and uniformity of the adhesive layer as shown by McIntyre (**col. 2, lines 25+**). Therefore, it would have been obvious to one of ordinary skill in the art to apply the adhesive material in the resultant laminate shown above.

Response to Arguments

13. Applicant's arguments filed 5/25/2010 have been fully considered but they are not persuasive. Applicant asserts that Hahn is silent to the adhesives in the interfacial region. Examiner has acknowledged that Hahn is silent to the adhesives in the interfacial region but it is noted that Hahn discloses quilting the top and bottom layers such that the intermediate layer does not move (**Example 1**) and further discloses the use of adhesives (**col. 7, lines 24+**). Furthermore, it is noted that no smaller piece is obtained from the quilting and as such, no finishing is applied.

Concerning Levy, Applicant asserts that no lamination is suggested or employed between the fluid permeable and/or fluid absorbing layers and Levy suggests the adhesive is a full layer and thus teaches away. As support, Applicant relies upon the drawing. Examiner respectfully disagrees regarding the adhesive being a full layer given that Levy explicitly recites forming the adhesive portion by means of cross-

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hatching or dot rollers which would intrinsically form discontinuous portions. While it is noted that Levy is silent to forming an interfacial bond between the permeable and absorbent layers, Examiner takes the position that Levy has clearly shown the effect of interfacial bonding by means of forming cross-hatching or dots of adhesive which results in the lamination being intact after washings (**col. 2, lines 24+**). Examiner further notes that Levy discloses that the diaper is breathable which implies the diaper has a permeability. Given that Hahn does not explicitly prevent the use of an adhesive with regards to the intermediate layer and discloses the use adhesive for the top breathable layer and impermeable layer and Levy discloses improved durability and extended product lifetime by patterning an adhesive material between each layer, Examiner takes the position that it would have been obvious to one of ordinary skill in the art to dispose a patterned adhesive between the layers of Hahn. Applicant further asserts that Levy does not address or solve the problem of wrinkling in the uppermost fluid permeable layer. Examiner respectfully disagrees and notes that the present claims require the adhesive to be in a pattern sufficiently dense to prevent what appears to be the entire laminate from wrinkling. Given that the Levy discloses the several patterns including cross-hatch, lines, and dots at an amount to give satisfactory bond strength which the patterns are the same as that presently claimed, Examiner takes the position that one of ordinary skill in the art would have been able to determine the amount of adhesive material used the resultant laminate of Hahn and Levy would result in the presently claimed laminate. Examiner further notes that the use is as a diaper which would thereby be sufficiently flexible in order to be used.

Regarding the Gagliardi and Carlucci references, Applicant asserts that the references are directed to placing continuous lines of adhesive on the edge portions and that the present invention is not about applying an adhesive along the border. Examiner respectfully disagrees and notes that while claim 4 is directed to forming a pattern in the shape of a border. Given that the references disclose forming strips of adhesives at the edges, Examiner takes the position that the pattern formed would be a border and as such meets the present limitations. Concerning the Tolbert reference, Applicant asserts that "a skilled person would not consider applying the hot melt adhesive in a pattern but as a seam". However, it is noted that "the arguments of counsel cannot take the place of evidence in the record", *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965). It is the examiner's position that the arguments provided by the applicant regarding that one of ordinary skill in the art would not know to use a hot melt adhesive in a pattern must be supported by a declaration or affidavit. As set forth in MPEP 716.02(g), "the reason for requiring evidence in a declaration or affidavit form is to obtain the assurances that any statements or representations made are correct, as provided by 35 U.S.C. 24 and 18 U.S.C. 1001". Examiner further notes that Levy discloses a patterned polyurethane adhesive and as such, one of ordinary skill in the art would have expected reasonable success with the hot melt polyurethane adhesive of Tolbert.

Concerning the McIntyre reference, Applicant asserts that the prior art discloses for diapers only placing the adhesive material on the perimeter. While the Examiner acknowledges that in terms of a diaper, this is the only disclosure, Examiner notes that

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the cylinder is comprised of pores and as such the broad disclosure of pores would include dots and lines. Examiner further notes that McIntyre discloses providing adhesive deposits where required and not applied where they are not needed (**col. 2, lines 12+**). Given the above disclosure, it is clear that one of ordinary skill in the art would have been able to pattern the adhesive and not just for the seams and edges. As such, the references when combined teach the present invention and have the amount of adhesive disposed to keep from wrinkling and inflexible, no smaller part would be obtained based upon the combined disclosures of Figures 3-5 of Hahn and Levy which would yield the presently claimed structure and the rejections are maintained.

Conclusion

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to PRASHANT J. KHATRI whose telephone number is (571)270-3470. The examiner can normally be reached on M-F 8:00 A.M.-5:00 P.M. (First Friday Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on (571) 272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Patricia L. Nordmeyer/
Primary Examiner, Art Unit 1783

PRASHANT J KHATRI
Examiner
Art Unit 1783